

Notice of Allowability

Application No.

10/736,616

Applicant(s)

NAGAI ET AL.

Examiner

Kallambella Vijayakumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/14/2005.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 17 December 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/277,044.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Mark Kopec
Primary Examiner

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Edward A. Meilmann on August 09, 2005.

The Specification is amended as follows:

In Page-1, Line-3, **AFTER** "2002" **DELETE** '.' and
 ADD --, now U. S. Patent No. 6,689,296.—

The Claims are amended as follows:

In Claim 18, Line-1, **AFTER** 'method' **DELETE** 'paste'
In Claim 19, Line-1, **AFTER** 'method' **DELETE** 'paste'
In Claim 20, Line-1, **AFTER** 'method' **DELETE** 'paste'

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

Claims 1-20 are allowed as amended over the prior art of record that neither teaches nor fairly suggestive of a method of producing a window glass with defogging wires and an automotive window glass with defogging wires per the method steps claimed by the applicants. Applicant's critical feature of applying an Ag-paste containing either molybdenum silicide or molybdenum boride over the glass surface forming conductive defogging tracks is neither taught nor fairly suggested by the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on M-Th, 07.00 - 16.30 hrs, Alt. Fri: 07.00-15.30 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMV
July 21, 2005.


Mark Kopec
Primary Examiner

AMENDMENTS TO THE CLAIMS

1 (currently amended). A method for producing a window glass with defogging heat wires, comprising:

providing a conductive paste comprising a silver powder, a molybdenum compound selected from the group consisting of molybdenum silicide and molybdenum boride, a glass frit; and an organic vehicle,

applying the conductive paste to a window glass in a predetermined pattern, and

baking the window having the paste thereon so as to form the defogging wires.

2 (original). The method according to Claim 1, wherein the predetermined pattern comprises at least two lines which are substantially parallel to each other.

3 (original). The method according to Claim 1, wherein the predetermined pattern includes a bus bar line disposed at one end of the window glass and connected to at least one line extending away from the bus bar line.

4 (original). The method according to Claim 1, wherein the window glass is an automotive window glass and the method further comprises incorporating the window glass into an automobile.

5 (original). The method according to Claim 1, wherein the molybdenum compound content is in the range of about 0.1 to 13 parts by weight relative to 100 parts by weight of the silver powder.

6 (original). The method according to Claim 5, wherein the molybdenum compound is molybdenum silicide.

7 (original). The method according to Claim 6, wherein the particle size of the silver powder is in the range of about 0.1 to 20 μm and the softening point of the glass frit is about 730°C or less.

8 (original). The method according to Claim 5, wherein the molybdenum compound is molybdenum boride.

9 (original). The method according to Claim 8, wherein the particle size of the silver powder is in the range of about 0.1 to 20 μm and the softening point of the glass frit is about 730°C or less.

10 (original). The method according to Claim 1, wherein the molybdenum compound is molybdenum silicide.

11 (original). The method according to Claim 1, wherein the molybdenum compound is molybdenum boride.

12 (currently amended). A method for producing an automotive window glass with defogging heat wires, comprising:

providing a conductive paste comprising a silver powder, about 0.1 to 13 parts by weight relative to 100 parts by weight of the silver powder of a molybdenum compound selected from the group consisting of molybdenum silicide and molybdenum boride, a glass frit; and an organic vehicle,

applying the conductive paste to a window glass substrate in a predetermined pattern which comprises at least two lines which are substantially parallel to each other, and

baking the window having the paste thereon so as to form the defogging wires.

13 (original). The method according to Claim 12, wherein the predetermined pattern includes a bus bar line disposed at one end of the window glass and connected to at least one of the parallel lines.

14 (original). The method according to Claim 13, wherein the window glass is an automotive window glass and the method further comprises incorporating the window glass into an automobile.

15 (original). The method according to Claim 12, wherein the molybdenum compound is molybdenum silicide.

16 (original). The method according to Claim 12, wherein the molybdenum compound is molybdenum boride.

17 (original). A method for producing an automotive window glass with defogging heat wires, comprising:

providing a conductive paste comprising a silver powder having a particle size in the range of about 0.1 to 20 μm , about 0.1 to 13 parts by weight relative to 100 parts by weight of the silver powder of a molybdenum compound selected from the group consisting of molybdenum silicide and molybdenum boride, a borosilicate glass frit having a softening point of about 730°C or less; and an organic vehicle,

applying the conductive paste to a window glass substrate in a predetermined pattern which comprises at least two lines which are substantially parallel to each other and a bus bar line disposed at one end of the window glass connected to at least one of the parallel lines, and

baking the window having the paste thereon so as to form the defogging wires.

18 (original). The method paste according to Claim 17, wherein the particle size of the silver powder is in the range of about 0.1 to 10 μm .

19 (original). The method paste according to Claim 17, wherein the particle size of the silver powder is in the range of about 0.1 to 5 μm .

20 (original). The method paste according to Claim 17, wherein the method further comprises incorporating the window glass into an automobile